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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/597,159	06/20/2000	Katsumi Nakahara	000004.00659	5140

27557 7590 01/29/2003

BLANK ROME COMISKY & MCCAULEY, LLP
900 17TH STREET, N.W., SUITE 1000
WASHINGTON, DC 20006

EXAMINER

DRUAN, THOMAS J

ART UNIT	PAPER NUMBER
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3724

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/597,159

Applicant(s)

NAKAHARA, KATSUMI

Examiner

Thomas J. Druan, Jr.

Art Unit

3724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3 and 4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3 and 4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination

1. The Request for Continued Examination (RCE) filed on 13 September 2002 under 35 CFR 1.114 is acceptable. An action on the RCE and the Amendment filed therewith follows.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 3-4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically, the last clause of newly amended Claim 3 states "wherein the cross position is rounded;" however, neither the drawings nor specification as originally filed supports this limitation. Remarks in the Amendment received 13 September 2002 point to Figs. 1B, 5, and 8 as support, but the drawings do not show with any clarity a rounded cross position. Furthermore, if the roundness of the cross position was critical to the invention, some mention of it should be present in the disclosure, but it is not. The limitation will be addressed in an art rejection nonetheless.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

5. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '997 in view of JP '998 in further view of US 3,745,869 to Ludwig (hereinafter Ludwig).

JP '997 discloses the invention substantially as claimed including an unset tooth 23, a left set tooth 25L, and a right set tooth 27R (fig. 5). Said teeth have a rake face 15 with a predetermined length A and a curved face 17 with radius B near the tip portion of the saw teeth (fig. 1). Pitches of the saw teeth are unequal with each other (fig. 2). The distance between the rake face and a line parallel to the rake face that passes through the cross position at the bottom-right corner of the curved face 17 is C. The blade has a blade thickness D, a set width T, and a relationship where $T=D+2\alpha$, where α is a setting coefficient. It would have been obvious to one skilled in the art to make the blade thickness of JP '997 less than 0.85 mm to provide a relatively thin general-purpose blade.

JP '997 discloses the invention substantially as claimed, including a distance C between the rake face and a line parallel to the rake face that passes through the bottom-right corner of the curl forming section 17, but lacks the limitation that $R/2 < A \leq 2B$. JP '998 discloses a distance A of 1.0 mm and a curved face radius of 1.5 mm (fig. 4), which lies within the claimed range, in order to produce a desired curling effect of the cut material. Also, discovery of an optimum value for a known process is obvious engineering (*In re Aller*, 105 USPQ 233). Therefore, it would have been obvious to make the dimension C of JP '997 within the claimed range in order to achieve a desired curl.

JP '997 in view of JP '998 discloses the invention substantially as claimed, but lacks a cross position that is rounded. Ludwig teaches the use of a rounded protuberance 61, or cross position, intermediate a tooth tip 64 and a gullet that "will greatly improve the

penetrating ability of the blade and prolong its wear life" (column 3, lines 59-60).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to make the cross position of JP '997 in view of JP '998 round in order to improve the penetrating ability of the blade and prolong its wear life.

Response to Arguments

6. Applicant's arguments with respect to claims 3 and 4 have been considered but are moot in view of the new ground(s) of rejection.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Druan, Jr. whose telephone number is 703-308-4200. The examiner can normally be reached on M-F (8:30-6:00) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 703-308-1082. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

agsg
tjd
January 16, 2003


BOYER ASHLEY
PRIMARY EXAMINER